

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 28 FEB 2006

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Applicant's or agent's file reference JR/JPH/P9694WO		<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/EP2005/003241	International filing date (day/month/year) 23.03.2005	Priority date (day/month/year) 24.03.2004	
International Patent Classification (IPC) or national classification and IPC C09J167/02, C09J7/00			
Applicant THE DOW CHEMICAL COMPANY et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 27.10.2005		Date of completion of this report 27.02.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Otegui Rebollo, J  Telephone No. +49 89 2399-8670	



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2005/003241

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements**\* of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-25 as originally filed

**Claims, Numbers**

1-24 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1,5-8,17-19
	No: Claims	2-4,9-16,20-24
Inventive step (IS)	Yes: Claims	
	No: Claims	1-24
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application N°

PCT/EP2005/00324

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability  
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: EP-A-0 349 874 (GEN ELECTRIC) 10 January 1990 (1990-01-10)
- D2: US-A-5 407 984 (BRUNELLE DANIEL J ET AL) 18 April 1995 (1995-04-18)
- D3: EP-A-0 381 897 (SORAM VERWALTUNGSGESELLSCHAFT ; BOSTIK FRANCE (FR); BOSTIK LTD (GB)) 16 August 1990 (1990-08-16)
- D4: WO 01/53379 A (WINCKLER STEVEN J ; CYCLICS CORP (US); TAKEKOSHI TOHRU (US)) 26 July 2001 (2001-07-26)
- D5: WO 02/22738 A (CYCLICS CORPORATION) 21 March 2002 (2002-03-21)
- D6: EP-A-0 320 656 (GEN ELECTRIC) 21 June 1989 (1989-06-21)
- D7: US-A-4 696 998 (BRUNELLE DANIEL J ET AL) 29 September 1987 (1987-09-29)
- D8: EP-A-0 630 931 (GENERAL ELECTRIC COMPANY) 28 December 1994 (1994-12-28)
- D9: EP-A-0 737 658 (GENERAL ELECTRIC COMPANY) 16 October 1996 (1996-10-16)
- D10: EP-A-0 566 313 (GEN ELECTRIC) 20 October 1993 (1993-10-20)
- D11: US-A-4 760 117 (ANDERSON PATRICIA P ET AL) 26 July 1988 (1988-07-26)
- D12: MENG Y Z ET AL: "Synthesis of cocyclic(arylene disulfide) oligomers and their adhesion properties as heating-melt adhesive" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 42, no. 12, June 2001 (2001-06), pages 5215-5224, XP004230986 ISSN: 0032-3861

1. The subject-matter of claims 2 to 4, 9-16 and 20 to 24 appears to be novelty anticipated (Article 33(2) PCT) by the reactive compositions comprising macrocyclic oligomers and at least a linear polymer and their uses as hot-melt adhesives as disclosed in document D1 (see passages cited in the search report, in particular, page 6, lines 22 to 24 ) and documents D4 to D12 (see passages cited in the search report). It is pointed out that in the manufacture of cyclic polymers there is always a certain amount of linears remaining. Furthermore, when curing a cyclic polymer containing compositions a mixture of cyclic and linears is naturally produced in the intermediate stages of the process. It is further pointed out that the intended use or definition of a (reactive) composition (in the present case as

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hot melt adhesive) does not usually provide novelty to an already described composition (see claims 21 to 24 of the application).

2. The subject-matter of claims 1, 5 to 8 and 17 to 19 appears to be obviously derivable (Article 33(3) PCT) from the teachings of D1 as ethylene is a typical olefin comonomer (see claim 1 thereof) and the application does not contain any indication that its selection may involve an unexpected effect. Furthermore, cyclic polyesters from dicarboxylic acids (see, for instance D2) are obvious alternatives to the cyclic polycarbonates disclosed in D1, which may formally be considered as polyesters derived from carbonic acid. Furthermore, the claimed method of using hot-melt adhesives by first melting them appears to be the standard procedure for applying hot-melt adhesives (see for instance the examples of D3).